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No. IX.

PERCUSSION LOCK FOR SHIPS' CANNON.

The GOLD VULCAN MEDAL was this session presented to T. DICKINSON, Esq., Capt. R. N., Purbrook-heath, near Portsmouth, for his mode of applying Percussion Powder to the discharge of Ships' Guns. The following communication has been received from the Candidate on the subject, and a model of the invention has been placed in the Society's repository.

Naval Club, Albemarle-street,

SIR,

March 30, 1825.

I HEREWITH send you a model of my invention for the application of the percussion principle of ignition to naval ordnance.

The copper tube represents the present touch-hole of the cannon, and that of brass the one to conduct the fire, being a pipe made with a very small orifice, which is to be countersunk to within one inch of the former ; which, being pierced by a small drill, continues the percussion communication into the former touch-hole, at one inch from the charge. The covering to that which was the touch-hole, but is now merely a blast-hole, is a protector against wet, and, as will be seen, is removed by the action of cocking, so as to admit of pricking the cartridge.

The great advantages to be gained by this plan are, in substance, instantaneous ignition, security against wet and

wind, and the abolition of the use of the powder-horn, that great source of the very numerous accidents by explosion on board ship, no other priming being necessary than that contained in the cap, a specimen of which I send you.

I am, Sir,

&c. &c. &c.

A. Aikin, Esq.

Secretary, &c. &c.

THOS. DICKINSON, (*b*)

Commander R. N.

Reference to the Engraving of Captain Dickinson's Percussion Lock for Ships' Cannon. Plate II. figs. 1, 2, and 3.

a The breech of the cannon.

b the nipple on which the cap of percussion powder is placed.

c the hammer.

d, fig. 3, part of the hammer formed into an inclined plane.

e a bolt or pin, lying loose in a horizontal hole, drilled in the cheek of the lock.

f a cover to the vent-hole, the upright part or tail of which abuts against the pin *e*.

g the screw, or centre-pin, on which the vent-cover turns.

h the spring which gives motion to the vent cover during the action of drawing up the hammer (or cocking), after the gun has been fired, so as to cause one end to cover the vent-hole, and the other end to press the pin *e* into the position in which it is shown in the figures.

i the trigger.

k k two transverse holes for the reception of two bolts *l l*, with heads at one end, and screwed at the other end, for the purpose of fastening the lock to the gun, as shown in fig. 2.

m m, fig. 2, screw-nuts to secure the bolts *l l*.

n, fig. 3, the original touch-hole of the gun, serving as a vent-hole, and for the introduction of a pointed wire, to prick the cartridge.

o a metallic tube, with a capillary bore, being a continuation of the nipple, down which the percussion powder acts.

p the cavity or chamber of the gun.